

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

ENTROPIC COMMUNICATIONS, LLC

Plaintiff,

v.

CHARTER COMMUNICATIONS, INC.,

Defendant.

Civil Action No. 2:22-CV-00125-JRG

JURY TRIAL DEMANDED

**REPLY IN SUPPORT OF ENTROPIC'S MOTION FOR SUMMARY
JUDGMENT OF VALIDITY UNDER 35 U.S.C. § 101**

Charter's abstract idea arguments overgeneralize the claims to the point of being meaningless and rely on inapposite case law contrary to Federal Circuit precedent.

A. The Claims of the '690 Patent are Not Directed to an Abstract Idea

Charter contends that "generating a probe by receiving and obeying instructions determining the nature of that probe involves nothing more than abstract data processing." Opp. at 3. However, Charter fails to refute the fact that the claims are directed to a specific improvement over prior art predetermined probes used in communication networks. And Charter is wrong that the purpose of determining characteristics of a communication channel "is not recited anywhere in the claim." Opp. at 3. This purpose is stated clearly in the Court's construction for "probe."

The cases cited by Charter are also distinguishable. The claims in *Elec. Power* related to a method of "collecting information, analyzing it, and displaying certain results" without more. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). The claims at issue in *buySAFE* related to methods of conducting financial transactions on generic computers. *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1352 (Fed. Cir. 2014). Finally, the Court in *First-Class Monitoring* emphasized that "[t]he claims are not directed to a technological solution to a technological problem, but merely look to the use of known technology to communicate information of a type that . . . has not previously been transmitted using that technology." *First-Class Monitoring, LLC v. United Parcel Service of America, Inc.*, 389 F. Supp. 3d 456, 466 (E.D. Tex. 2019). The claims of the '690 Patent do not merely recite collecting and displaying information but are instead directed to generating and transmitting network probes in a way that increases the diagnostic capabilities of the network. *See Mot.* at 4–5.

B. The Claims of the '008 and '826 Patents are Not Directed to an Abstract Idea

Charter contends that the claims of the '008 and '826 Patents "do nothing more than receive a signal, digitize the signal, extract information from the signal, analyze the signal and send

information based on that analysis back to the source of the signal.” But Charter both oversimplifies the claims and ignores how they improve the performance of a receiver. The ’008 and ’826 Patents claim a specific, structured, combination of defined physical elements, including an analog-to-digital converter, signal monitor, data processor, and channelizer. *See e.g.* ’008 Pat. cl. 1. These are not generic functional boxes but concrete circuit elements. Charter even argued as much at the claim construction hearing. *See* Ex. C to Shimota Decl., Claim Construction Hearing Tr., 73:21–74:2 (“they have to be three separate pieces of hardware, three distinct structural elements . . . a signal monitor, a data processor, and a channelizer”). This arrangement of hardware allows the digitized signal to be provided to the signal monitor and data processor in a manner advantageously allowing for signal monitoring and without interrupting recovery of data from the digitized signal. The specific combination of elements solves a technical problem—how to analyze the network’s operation and report results without interrupting user service—thus providing a specific improvement to the performance of set top boxes and cable modems.

As such, the claims are directed to more than simply “collecting, analyzing, manipulating, and displaying data,” as in the cases Charter cites. *See, e.g., Univ. of Fla. Rsch. Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1368 (Fed. Cir. 2019); *see also In re TLI Comm’s LLC Patent Litigation*, 823 F.3d 607, 611. Instead, the claims are directed to a specific and non-conventional arrangement of components to achieve an improvement in remotely determining the performance of a cable network without interfering with the processing of content provided via the network. The claims are directed to patentable subject matter. *See, e.g., SRI Int’l, Inc. v. Cisco Systems, Inc.*, 930 F.3d 1295, 1303–04 (Fed. Cir. 2019).

C. The Claims of the ’362 Patent are Not Directed to an Abstract Idea

Charter attempts to reduce the claims of the ’362 Patent to nothing more than “filtering out portions of a signal.” *See* Opp. at 8. However, Charter ignores that the claims are directed to a

specific set of steps and structural elements that together provide a technical improvement in signal processing technology. As the patent notes, prior art block tuners were only able to capture small contiguous portions of the frequency band, meaning desired channels could not be captured at the same time if they were in non-contiguous portions of the spectrum. *See* Mot. at 10. The claims of the '362 Patent are directed to a wideband receiver system capable of digitizing and selecting desired channels from non-contiguous portions of the spectrum. The claims use a “mixer” and “wideband analog-to-digital converter” in a novel way to advantageously perform the steps of digitizing and selecting *before* outputting the selected channels to a demodulator, eliminating the need for more expensive components. *See* Dkt. No. 123 at 63 (Order of Steps); '362 Patent, 2:24–27 (“It is desirable to have wideband receiver systems that can increase the dynamic range without requiring expensive data conversion, filtering and channel selection at the demodulator”).

As such, the *CardioNet* case cited by Charter is distinguishable. The claims there were directed to the steps of “identifying heart beats in a sensed cardiac signal,” “activating a frequency domain T wave filter,” and “outputting information corresponding to the identified heart beats to a communications channel.” *See CardioNet, LLC v. InfoBionic, Inc.*, 2020-2123, 2021 WL 5024388, at *2 (Fed. Cir. Oct. 29, 2021). There, “the very purpose of the invention centers on using the T wave filter to filter data,” which was nothing more than a mathematical equation. *Id.* at 4. Here, by contrast, the claims are not directed to an application of a mathematical formula, but rather the use of a specific tuner architecture that overcomes problems in the prior art.

D. The Claims of the '682 Patent are Not Directed to an Abstract Idea

The claims of the '682 Patent involve grouping the cable modems into service groups and determining appropriate communication parameters for each service group. This improves upon the operation of prior art CMTSs, which could only treat all cable modems the same. This grouping and assignment of modems achieves a tangible improvement to the operation of the cable network.

Charter’s analogies to cases regarding data collection are inapposite. The claims are not directed to the mere “collection, organization, grouping, and storage of data using techniques such as conducting a survey or crowdsourcing,” as in *Jobin*. See *In re Jobin*, 811 F. App’x 633, 637 (Fed. Cir. 2020). Rather, they recite functions of a CMTS that were not performed in the prior art and change the way the CMTS communicates with cable modems. *Two-Way Media* is likewise distinguishable. That case involved a claim reciting steps of converting a plurality of data streams into streams of digital packets, routing each stream to one or more users in response to selection signals, and monitoring/recording which streams were received by which users. See *Two-Way Media Ltd. v. Comcast Cable Comm’s, LLC*, 874 F.3d 1329, 1334–35 (Fed. Cir. 2017). There is no recitation of structure aside from “a communications network” and “users,” hence why the claims amounted to nothing more than “functional results.” See *id.* at 1337. In contrast, the claims of the ’682 Patent recite improvements in the functionality of CMTS and cable modem equipment.

Charter argues that the claims are ineligible because “[t]he distribution of the cable modems is not ‘arranged’ or changed in any actual, physical way.” Opp. at 11. But physical change is not the test for eligibility. Even if it were, Claim 1 recites using the communication parameters to change the way the CMTS communicates with the cable modems—a tangible modification to the operation of the network. See, e.g., *Diamond v. Diehr*, 450 US 175, 192 (“when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101”). Charter does not refute this point.

E. Conclusion

For the reasons above, the Court should grant Entropic’s motion for summary judgment that the asserted claims of the ’690, ’008, ’826, ’362, and ’682 Patents are subject matter eligible.

Dated: October 3, 2023

Respectfully submitted

/s/ James A. Shimota

James Shimota

Jason Engel

George Summerfield

Katherine L. Allor

Samuel P. Richey

Ketajh Brown

K&L GATES LLP

70 W. Madison Street, Suite 3300

Chicago, IL 60602

Tel: (312) 807-4299

Fax: (312) 827-8000

jim.shimota@klgates.com

jason.engel@klgates.com

george.summerfield@klgates.com

katy.allor@klgates.com

samuel.richey@klgates.com

ketajh.brown@klgates.com

Nicholas F. Lenning

Courtney Neufeld

K&L GATES LLP

925 Fourth Avenue, Suite 2900

Seattle, WA 98104-1158

Tel: (206) 623-7580

Fax: (206) 623-7022

nicholas.lenning@klgates.com

courtney.neufeld@klgates.com

Darlene Ghavimi

Matthew A. Blair

K&L GATES LLP

2801 Via Fortuna, Suite 650

Austin, Texas 78746

Tel: (512) 482-6800

darlene.ghavimi@klgates.com

matthew.blair@klgates.com

Christina N. Goodrich

Connor J. Meggs

K&L GATES LLP

10100 Santa Monica Blvd., 8th Floor

Los Angeles, CA 90067

Tel: (310) 552-5031

Fax: (310) 552-5001
christina.goodrich@klgates.com
connor.meggs@klgates.com

Peter E. Soskin
K&L GATES LLP
Four Embarcadero Center, Suite 1200
San Francisco, CA 94111
Tel: (415) 882-8046
Fax: (415) 882-8220
peter.soskin@klgates.com

Wesley Hill
Texas Bar No. 24032294
Andrea Fair
Texas Bar No. 24078488
Charles Everingham, IV
Texas Bar No. 787447
WARD, SMITH & HILL, PLLC
1507 Bill Owens Pkwy
Longview, TX 75604
Tel: (903) 757-6400
wh@wsfirm.com
andrea@wsfirm.com
ce@wsfirm.com

ATTORNEYS FOR PLAINTIFF
ENTROPIC COMMUNICATIONS, LLC

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a) and served via the Court's CM/ECF system on all counsel of record on October 3, 2023.

/s/ James Shimota

James Shimota